Water- absorbing composite prodn. - by adding crosslinking agent to aq. soln. of polyacrylic acid and polyacrylate with initiator, spraying with fibres and polymerising
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Abstract (Basic): JP 62062829 A

Composite material comprising highly water-absorbing polymers and moulded fibrous base material is produced by adding small amt. of (1) crosslinking agent to (2) aq. soln. of polymerisable monomer comprising acrylic acid and acrylates in which above 20% of the carboxyl gps. have been neutralised, with alkali metal salt, or ammonium salt, mixing with (3) water-sol. radical polymerisation initiator opt. mixed with water-sol. reducing agent, spraying (A) moulded fibrous base material with (B) mixed liq. ensuring that the highly water-absorbing polymer contd. in (A) has granular dia. of 30-500 nm, and polymerising.

USE/ADVANTAGE - The composite material is used for the mfr. of napkins for menstruation, paper diapers. It has excellent water-absorbing property and large water-absorption velocity. The polymer gel having absorbed water and having swollen has high strength.

In an example, 13.1 g of NaOH was dissolved in 39 g of distilled water under ice-cooling. 30 g of acrylic acid was gradually added to the soln. Monomer aq. soln. having a neutralisation of 75% and monomer concn. of 45 wt.% was prepd. 0.0085 g of N,N'-methylene bisacrylamide, 0.2 of 2,2'-azobis(2-amidinopropane) dihydrochloride were dissolved in the monomer aq. soln. and deaerated with N2. 0.1051 g of polyester nonwoven cloth was sprayed with the monomer aq. soln. The amt. of the monomer applied was 8.0 times the wt. of the nonwoven cloth. The unwoven cloth was placed in a reactor held at 50 deg.C, heated to 90 deg.C over the period of 10 mins. Then, the water-absorbing composite material contg. water-absorbing polymer having a granular dia. of 100-300 um was obtd. 0/0
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